

ABSTRACT

**Comparative Study of Number Of Diffusion Gradient Direction on  
Diffusion Tensor Imaging Brain  
In the case Brain Tumor**

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Diffusion Tensor Imaging (DTI), namely MRI examination which is the diffusion of water analysis which can shows the network architecture visualization of the brain structure of the complex. Comparison study was conducted to find out if there is a difference in the results of Fractional Anisotropy (FA) and Fiber Tracking results on a Number Of Diffusion Gradient Direction (NDGD) 15 and 25 in the case of a brain tumor. Research methods used in this research is a type of observational analytic study with a prospective approach capture data that does not exist. Total used is the sample 5 sample on the respective Number Of Diffusion Gradient Direction (NDGD). The results of the measurements will be processed to get a conclusion whether there is a difference in the results of Fractional Anisotropy (FA) and Fiber Tracking usage Number Of Diffusion Gradient Direction are different on Diffusion Tensor Imaging Brain in the case of a brain tumor. So it can be concluded that the results of Fractional Anisotropy (FA) usage Number Of Diffusion Gradient Direction there is a difference but not significant whereas on results of Fiber Tracking in on Informative Score of both Number Of Diffusion Gradient Direction get the same result that is very informative and then in terms of image resolution Number Of Diffusion Gradient Direction 25 is better than 15. Best Number Of Diffusion Gradient Direction on Diffusion Tensor Imaging is used on the Brain in the case of a brain tumor is 25.

**Key Word :** NDGD,DTI, Brain Tumor, FA, Fiber Tracking

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